

Amendments to the Claims:

Claim 1 (Canceled).

Claim 2 (Previously Presented): The video game system according to claim 14, wherein the interface is programmable to poll the controllers a predetermined number of times between each vertical blanking interval.

Claim 3 (Previously Presented): The video game system according to claim 14, wherein the interface is programmable to poll the controllers based on a number of video lines.

Claim 4 (Previously Presented): The video game system according to claim 14, wherein the interface polls a status of the controllers.

Claim 5 (Original): The video game system according to claim 4, wherein the status of the controllers includes data indicative of player inputs.

Claim 6 (Previously Presented): The video game system according to claim 5, wherein the player inputs comprise button presses.

Claim 7 (Previously Presented): The video game system according to claim 5, wherein the player inputs comprise positions of a user manipulable joystick.

Claim 8 (Original): The video game system according to claim 4, wherein the status of the controllers includes error data.

Claim 9 (Original): The video game system according to claim 8, wherein the error data is indicative of no response from a controller in response to a transfer of data thereto.

Claim 10 (Original): The video game system according to claim 8, wherein the error data is indicative of a data collision.

Claim 11 (Original): The video game system according to claim 8, wherein the error data is indicative of the game program executing system receiving more than a predetermined amount of data from the controller.

Claim 12 (Original): The video game system according to claim 8, wherein the error data is indicative of the game program executing system receiving less than a predetermined amount of data from the controller.

Claim 13 (Canceled)

Claim 14 (Previously Presented): A video game system, comprising:

a game program executing system executing a game program;

one or more controllers supplying user inputs to the game program executing system;

an interface between the controllers and the game program executing system, the interface being programmable to periodically poll the controllers without involvement of the game program executing system, wherein the interface comprises:

a double buffer for storing data transferred between the game program executing system and the controllers; and

a status register comprising one or more bits which are indicative of a status of a copy operation for copying data from one buffer to another of the double buffer.

Claim 15 (Original): The video game system according to claim 14, the interface further comprising:

selectors for selectively connecting the controllers to either the double buffer or the communication RAM.

Claim 16 (Previously Presented): The video game system according to claim 14, the interface further comprising:

a modem.

Claim 17 (Previously Presented): The video game system according to claim 14, the controller including a vibration circuit for vibrating a housing of the controller.

Claim 18 (Previously Presented): The video game system according to claim 14, the controller including a read/write memory.

Claims 19 and 20 (Canceled).

Claim 21 (Previously Presented): A video game system, comprising:
a game program executing system executing a game program;
a controller supplying user inputs to the game program executing system; and
an interface interfacing between the game program executing system and the controller, the interface including communication circuitry operable in a first mode in which data of a fixed size is communicated between the game program executing system and the controller and in a second mode in which data of variable size is communicated between the game program executing system and the controller, wherein the interface further comprises:

a communication memory for storing the variable size data;
a double buffer for storing the fixed size data; and
a switching device for selectively connecting either the double buffer or the communication memory to the controller.

Claim 22 (Original): The video game system according to claim 21, the interface further comprising:

selectors for selectively connecting the controllers to either the double buffer or the communication RAM.

Claim 23 (Previously Presented): The video game system according to claim 21, the interface further comprising:

a modem.

Claim 24 (Previously Presented): A video game system, comprising:
a game program executing system having connectors connectable to one or more game controllers; and

an interface between the connectors and the game program executing system, the interface comprising a double buffered input register and a double buffered output

register corresponding to each connector, each double buffered output register comprising first and second output registers for storing data from the game program executing system for output to a controller connected thereto and each double buffered input register comprising first and second input registers for storing data from a controller connected thereto for input to the game program executing system.

Claim 25 (Previously Presented): The video game system according to claim 24, wherein copying of data from the first output register of one or more of the double buffered output registers to the second output register thereof is timed to start with vertical blanking of a display connected to the video game system.

Claim 26 (Previously Presented): The video game system according to claim 24, wherein the second output registers are locked while data stored therein is output to the controllers connected thereto.

Claim 27 (Previously Presented): The video game system according to claim 24, wherein data written to the first output register from the game program executing system is copied to the second output register.

Claim 28 (Previously Presented): The video game system according to claim 24, wherein data output to each controller comprises a command packet and one or more data packets.

Claim 29 (Previously Presented): The video game system according to claim 24, wherein data input from each controller comprises input data and status data.

Claim 30 (Currently Amended): A video game system, comprising:
a game program executing system supplied with user inputs from one or more game controllers; and

an interface between the controllers and the game program executing system, the interface comprising first and second different storage devices for storing data transferred between the game program executing system and the controllers, and selector circuitry for selectively connecting the controllers to either of the first or ~~and~~ second storage devices.

Claim 31 (Previously Presented): The video game system according to claim 30, wherein one of the first and second storage devices is adapted for storing variable size data and the other of the first and second storage devices is adapted for storing fixed size data.

Claim 32 (Previously Presented): The video game system according to claim 30, wherein the first storage device comprises double buffered input and output registers.

Claim 33 (Previously Presented): The video game system according to claim 32, wherein output data from the game program executing system is copied from a first register of the output buffer to a second buffer of the output buffer after the output data is written to the first buffer.

Claim 34 (Previously Presented): The video game system according to claim 32, wherein input data from the controllers is copied from a first buffer of the input buffer to a second buffer of the input buffer after the input data is written to the first buffer.

Claim 35 (Previously Presented): The video game system according to claim 30, further comprising:

a modem connected to the selector circuitry.

Claim 36 (Previously Presented): A method of supplying data to a game program executing system of a video game system from controllers connected thereto, the method comprising:

receiving data from the controllers;

supplying the received data to selector circuitry;

supplying the received data from the selector circuitry to a first storage device accessible by the game program executing system if the selector circuitry is in a first state; and

supplying the received data from the selector circuitry to a different, second storage device accessible by the game program executing system if the selector circuitry is in a second state.

Claim 37 (Previously Presented): The method according to claim 36, wherein fixed-size data received from the controllers is supplied to the first storage device and variable-size data received from the controllers is supplied to the second storage device.

Claim 38 (Previously Presented): A method of supplying data from game program executing system of a video game system to controllers connected thereto, the method comprising:

selectively storing data from the game program executing system in first and second different storage devices connected to selector circuitry;

supplying stored data from the first storage device to the controllers if the selector circuitry is in a first state; and

supplying stored data from the second storage device to the controllers if the selector circuitry is in a second state.

Claim 39 (Previously Presented): The method according to claim 38, wherein fixed-size data from the game program executing system is stored in the first storage device and variable-size data from the game program executing system is stored in the second storage device.

Claim 40 (Previously Presented): The video game system according to claim 14, further comprising:

a communication RAM for storing data transferred between the game program executing system and the controllers.

Claim 41 (Previously Presented): The video game system according to claim 40, further comprising:

a switching device for selectively connecting either the double buffer or the communication RAM to the controllers.

Claim 42 (Previously Presented): The video game system according to claim 21, further comprising:

a status register comprising one or more bits indicative of a status of a copy operation for copying data from one buffer to another of the double buffer.

Claim 43 (Previously Presented): The video game system according to claim 24, wherein the interface further comprises status registers, each status register indicating a status of a copy operation for copying data from the first output register to the second output register of a corresponding double buffered output register.

Claim 44 (Previously Presented): A video game system, comprising:

a game program executing system;

a connector for connecting to a peripheral device; and

an interface between the connector and the game program executing system, the interface comprising a double buffered input register and a double buffered output register, wherein

output data from the game program executing system is copied from a first output register to a second output register of the double buffered output register after the output data is written to the first output register, and copying from the first output register to the second output register is selectively lockable, and

input data from the peripheral device is copied from a first input register to a second input register of the double buffered input register after the input data is written to the first input register, and copying from the first input register to the second input register is selectively lockable.

Claim 45 (Previously Presented): The video game system according to claim 44, wherein the interface further comprises a status register comprising one or more bits indicative of a status of a copy operation for copying data from the first output register to the second output register.

Claim 46 (Previously Presented): A video game system, comprising:

a game program executing system;

a connector for connecting to a peripheral device; and

an interface between the game program executing system and the connector, the interface comprising a first storage device for storing data of a first type which is transmitted to or received from a peripheral device connected to the connector; a different, second storage device for storing data of a second type which is transmitted to or received from a peripheral device connected to the connector; and a switching device for selectively connecting the peripheral device to either the first storage device or the second storage device.

Claim 47 (Previously Presented): The video game system according to claim 46, wherein the data of the first type is variable-size data and the data of the second type is fixed-size data.

Amendments to the Drawings

The attached sheets of drawings include annotated sheets showing changes to Figures 3, 4, 5, 11 and 17. Figure 3 has been changed to designate the legend "Controllers" with the reference numeral 52, rather than 108. Figure 4 has been changed to designate the "Graphics Memory Request Arbitration" with the reference numeral 131, rather than 130. Figure 5 has been changed to designate the rasterize block with the reference numeral 400b, rather than 400. Figure 11 has been changed to designate the Communication RAM with the reference numeral 1014, rather than 1410, and to designate the buffer with the reference numeral 1016, rather than 1414. Figure 17 has been changed to identify the DATA lines connected to the Connectors.

Appendix: Replacement Sheets for all Figures (including changes made to the drawings in prior responses)

Annotated Sheets showing changes